

### **REMARKS/ARGUMENTS**

Favorable reconsideration and allowance of the present application is respectfully requested. Claims 1 and 5-10 are pending in the above application, of which claims 1 and 5 are independent.

The Office Action dated December 10, 2009, has been received and carefully reviewed. In that Office Action, claims 1-10 were rejected under 35 U.S.C. 112, second paragraph as being indefinite, claims 1-3, 5 and 7-10 were rejected under 35 U.S.C. 102(b) as being anticipated by EP 0128514 (hereinafter, "Nakagawa"), claims 1, 3-5 and 7-10 were rejected under 35 U.S.C. 102(b) as being anticipated by EP 1154042 (hereinafter "Kojima") and claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa or Kojima. Each of these issues is addressed below, and reconsideration and allowance of claims 1 and 5-10 is respectfully requested in view of the above amendments and the following remarks.

### **SPECIFICATION**

By the above amendment, the specification has been amended to provide section headings and to improve the readability thereof, which amendments do not add any new subject matter.

### **REJECTIONS UNDER 35 U.S.C. 112, SECOND PARAGRAPH**

The section 112, second paragraph, issues identified in the Office Action have been addressed by the above amendments, Wherefore, the withdrawal of the rejections of claims 1-10 under 35 U.S.C. 112, second paragraph, is respectfully

requested.

REJECTIONS UNDER 35 U.S.C. 102(b)

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa. Claim 1 as amended recites a heat exchanger having a number of heat transfer surfaces made from aluminum or aluminum compounds, to which a plurality of layers have been applied. The first layer of the plurality of layers comprises nanoparticles of a first composition applied to the aluminum or aluminum compounds and which provide corrosion resistance to the aluminum or aluminum compounds and the second layer of the plurality of layers comprises nanoparticles of a second composition different than the first composition that have hydrophilic properties and a wetting contact angle with water of less than or equal to 40°. The nanoparticles of the plurality of layers comprise organic and/or inorganic compounds of boron and/or cerium dissolved and/or dispersed in inorganic and/or organic solvents. Nakagawa does not disclose or suggest nanoparticles comprising organic and/or inorganic compounds of boron and/or cerium dissolved and/or dispersed in inorganic and/or organic solvents as recited in claim 1, and claim 1 is submitted to be allowable for at least this reason.

Claims 7-10 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

Claim 5 as amended recites a heat exchanger having a number of heat transfer surfaces made from metal to which a plurality of layers have been applied, nanoparticles being used for the layers, in which the nanoparticles comprise nanoparticles of organic and/or inorganic compounds of boron and/or cerium dissolved

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and/or dispersed in inorganic and/or organic solvents. Nakagawa does not disclose at least nanoparticles of organic and/or inorganic compounds of boron and/or cerium dissolved and/or dispersed in inorganic and/or organic solvents, and claim 5 is submitted to be allowable over Nakagawa for at least this reason.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kojima. Claim 1 as amended recites, inter alia, a heat exchanger coated with nanoparticles of organic and/or inorganic compounds of boron and/or cerium dissolved and/or dispersed in inorganic and/or organic solvents. Such a heat exchanger is not shown in Kojima, and claim 1 is submitted to be allowable over Kojima for at least this reason.

Claims 6-10 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Kojima. Claim 5 recites a heat exchanger having a number of heat transfer surfaces made from metal to which a plurality of layers have been applied, nanoparticles being used for the layers, in which the nanoparticles comprise nanoparticles of organic and/or inorganic compounds of boron and/or cerium dissolved and/or dispersed in inorganic and/or organic solvents. Kojima does not disclose at least nanoparticles of organic and/or inorganic compounds of boron and/or cerium dissolved and/or dispersed in inorganic and/or organic solvents, and claim 5 is submitted to be allowable over Kojima for at least this reason.

#### REJECTIONS UNDER 35 U.S.C. 103(a)

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over either

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Nakagawa or Kojima. By the above amendment, claim 4 has been cancelled without prejudice.

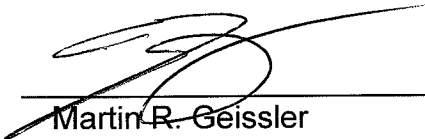
### **CONCLUSION**

Each issue raised in the Office Action dated December 10, 2009, has been addressed, and it is believed that claims 1 and 5-10 are in condition for allowance. Wherefore, reconsideration and allowance of these claims is earnestly solicited. If the examiner believes that any additional changes would place the application in better condition for allowance, the examiner is invited to contact the undersigned attorney at the telephone number listed below.

#### *Deposit Account Authorization*

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 50-3828 and please credit any excess fees to such deposit account.

Respectfully submitted,

  
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